

F. TENT COOPERATION TREA.

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE
in its capacity as elected Office

Date of mailing (day/month/year) 06 June 2001 (06.06.01)	
International application No. PCT/US00/17477	Applicant's or agent's file reference RCA89633
International filing date (day/month/year) 26 June 2000 (26.06.00)	Priority date (day/month/year) 15 July 1999 (15.07.99)
Applicant NEAL, Charles, Bailey	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
09 February 2001 (09.02.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Henrik Nyberg Telephone No.: (41-22) 338.83.38
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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RCA89633	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 17477	International filing date (day/month/year) 26/06/2000	(Earliest) Priority Date (day/month/year) 15/07/1999
Applicant THOMSON LICENSING S.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

3

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

National Application No
PCT/US 00/17477

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N9/64 G09G5/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04N G09G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 10678 A (BLATTER HAROLD ; THOMSON CONSUMER ELECTRONICS (US)) 20 March 1997 (1997-03-20) abstract; figure 3 page 5, line 16 -page 10, line 34 ---	1, 10
A	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 02, 26 February 1999 (1999-02-26) & JP 10 304272 A (KENWOOD CORP), 13 November 1998 (1998-11-13) abstract ---	1, 10
A	EP 0 833 506 A (FUJI PHOTO FILM CO LTD) 1 April 1998 (1998-04-01) abstract; figure 2 -----	1, 10

☐

Further documents are listed in the continuation of box C.

☒

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

27 October 2000

Date of mailing of the international search report

06/11/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
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Authorized officer

Pigniez, T

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/17477

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9710678	A	20-03-1997	AU 6977496 A	01-04-1997
			AU 7071296 A	01-04-1997
			AU 7071396 A	01-04-1997
			AU 7109396 A	01-04-1997
			AU 7159296 A	01-04-1997
			BR 9610521 A	30-03-1999
			BR 9610529 A	06-07-1999
			BR 9610539 A	06-07-1999
			BR 9610549 A	06-07-1999
			CN 1200859 A	02-12-1998
			CN 1200858 A	02-12-1998
			CN 1201579 A	09-12-1998
			CN 1201580 A	09-12-1998
			CN 1201581 A	09-12-1998
			DE 69601583 D	01-04-1999
			DE 69601583 T	24-06-1999
			DE 69606185 D	17-02-2000
			DE 69606185 T	25-05-2000
			EP 0850541 A	01-07-1998
			EP 0850542 A	01-07-1998
			EP 0850543 A	01-07-1998
			EP 0850544 A	01-07-1998
			EP 0853858 A	22-07-1998
			ES 2140898 T	01-03-2000
			JP 11512584 T	26-10-1999
			JP 11512585 T	26-10-1999
			JP 11512586 T	26-10-1999
			JP 11512587 T	26-10-1999
			JP 11512588 T	26-10-1999
			US 6034738 A	07-03-2000
			WO 9710679 A	20-03-1997
			WO 9710680 A	20-03-1997
			WO 9710681 A	20-03-1997
			WO 9710682 A	20-03-1997
JP 10304272	A	13-11-1998	NONE	
EP 0833506	A	01-04-1998	DE 69129730 D	13-08-1998
			DE 69129730 T	12-11-1998
			EP 0484981 A	13-05-1992
			JP 2898807 B	02-06-1999
			JP 5216463 A	27-08-1993
			US 5426731 A	20-06-1995
			US 5327156 A	05-07-1994

PATENT COOPERATION TREATY

EXPRESS MAIL EL902321815 US

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

RECEIVED

SEP 19 2001

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IS&S

To:

KIEL, Paul P.
THOMSON MULTIMEDIA LICENSING INC.
P.O. Box 5312
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ETATS-UNIS D'AMERIQUE

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

13.09.2001

Applicant's or agent's file reference

RCA89633

IMPORTANT NOTIFICATION

International application No.
PCT/US00/17477International filing date (day/month/year)
26/06/2000Priority date (day/month/year)
15/07/1999

Applicant

THOMSON LICENSING S.A.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Event	DPH Final Country Selection to David
Deadline	15 Nov 2001
Entered	DPF 9/24/01

Name and mailing address of the IPEA/



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Schalinatus, D

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RCA89633	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US00/17477	International filing date (<i>day/month/year</i>) 26/06/2000	Priority date (<i>day/month/year</i>) 15/07/1999	
International Patent Classification (IPC) or national classification and IPC H04N9/64			
Applicant THOMSON LICENSING S.A.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 09/02/2001	Date of completion of this report 13.09.2001
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div>	Authorized officer Haybach, R Telephone No. +49 89 2399 8990



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/17477

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-8 as originally filed

Claims, No.:

1-8 as received on 13/08/2001

Drawings, sheets:

1-3 as received on 03/02/2001 with letter of 29/01/2001

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/17477

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-8
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-8
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-8
	No:	Claims	

2. Citations and explanations
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Article 6, PCT

1. Claims 1 and 6 define a means and method for generating an OSD signal comprising a colour palette and a plurality of colour conversion means. However the claim does not state that and on which basis the OSD signal is originally generated before it is converted and finally combined with the first or second video signal.

For the purpose of further examination the claims are interpreted such that an OSD signal is generated on the basis of a colour palette of a predetermined colour format. This OSD signal is then converted by one of the plurality of conversion matrices into the desired output format to be combined with the video signal.

Article 33 PCT

2. The object of the invention is to provide an OSD signal generator which can be used together with different video formats. In particular the colour, the OSD is generated in, should be kept the same when it is combined with differed video signals having different colour formats.

According to the invention this is achieved by generating the OSD signal on the basis of a predetermined colour palette having a predetermined colour format. Then the generated OSD signal is converted by one of several colour conversion matrices, which are selected according to the desired video output colour format, into an OSD signal having a colour format matching the video signal colour format.

3. Prior art

The abstract of JP10 304272 discloses a method of producing graphics having a colour format that matches the colour format of a received signal wherein the signal source type is identified (NTSC,PAL), a graphics signal is generated and overlayed on the NTSC/PAL signal and the selected type is displayed (in RGB format).

WO97/10678 discloses in Fig. 2 a digital/analogue VTR which is connected to a

digital receiver and a TV. The VTR has OSD capability to produce an overlay over analogue or digital signals. For this different horizontal and vertical timing is provided to the OSD circuit.

EP-A-0 833 506 discloses to transform video signals (NTSC, RGB, S-video) into VGA signals and vice versa. The input video signals are converted to RGB and mixing with an OSD signal seems to take place with the RGB signal similar to what is described in the description of this application.

There is no hint in the available prior art to correct the colour of the OSD in response to the colour format of the output signal by generating the OSD in one format and converting it into the desired format for combination with the video signal.

10/030834

9 531 Rec'd PCT/PTC 10 JAN 2002

1. A video signal processing apparatus, comprising:
a first video signal source (150) for providing a first video signal having
a first color format;

a second video signal source (151) for providing a second video signal
5 having a second color format;

means for generating an On Screen Display (OSD) signal
(103,105,165) formatted in accordance with the first or second color format, the
generating means comprising

a color palette (125) that includes color information formatted in
10 accordance with a predetermined color format, and

a plurality of color conversion matrices (107, 109) for converting
the color information in the color palette to provide the OSD signal, which is
formatted in accordance with a selected one of the first or second color format, in
response to the selection of the first or second video signal source; and

15 means (110,140,122), operatively coupled to the OSD generating
means and the first and second video signal sources, for combining the OSD signal
generated by the OSD generating means with the selected one of the first or second
video signals.

20 2. The apparatus of claim 1, wherein the color palette (125) comprises
color information formatted in the RGB format.

3. The apparatus of claim 1, wherein the plurality of conversion
matrices (107, 109) includes a conversion matrix for converting the color information
25 in the color palette into Y, P_R, P_B format, and a conversion matrix for converting the
color information in the color palette into Y, P_I, P_Q format.

4. The apparatus of claim 1, wherein the first video signal is an analog
television signal.

30 5. The apparatus of claim 1, wherein the second video signal is a
digital television signal.

6. A method of producing graphics having a color format that matches the color format of a received signal, the method comprising the steps of:

selecting a video signal source from a plurality of video signal sources (150,151), the signal source providing video signals formatted in accordance with a first color signal format;

providing a color palette (125) that includes color information formatted in accordance with a predetermined color format;

providing a plurality of color conversion matrices (107, 109), wherein each color conversion matrix is adapted to convert the color information in the color palette to provide a graphics signal that is formatted in accordance with a particular color format;

selecting a desired one of the plurality of color conversion matrices that corresponds to the selected video signal source and generating a graphics signal ($Y, P_R, P_B; Y, P_I, P_Q$) formatted in accordance with the first color signal format;

combining the graphics signal with the received signal; and processing the combined signal to generate an output signal (RBG).

7. The method of claim 6, wherein the color palette comprises color information formatted in the RGB format.

8. The method of claim 6, wherein the color conversion matrices convert the color information in the color palette into one of a Y, P_R, P_B formatted signal and Y, P_I, P_Q formatted signal.

What is claimed is:

1. A video signal processing apparatus,
5 comprising:
a first video signal source (150) for providing a first video signal having a first color format;
a second video signal source (151) for providing a second video signal having a second color format;
10 means for generating an On Screen Display (OSD) signal (103,105,165) having one of a plurality of color formats, the generating means having a plurality of color palettes, each palette having color information in a particular color format; and
15 means for combining the OSD signal (110,140) with a selected one of the first or second video signals, the generating means providing the OSD signal in a color format that corresponds the color format of the selected one of the first or second video signals.
20
2. The apparatus of claim 1, wherein one of the plurality of color palettes (103) comprises color information in a Y, P_R, P_B format.
- 25 3. The apparatus of claim 1, wherein one of the plurality of color palettes (105) comprises color information in a Y, P_I, P_Q format.
4. The apparatus of claim 1, wherein the first
30 video signal is an analog television signal.
5. The apparatus of claim 1, wherein the second video signal is a digital television signal.
- 35 6. The apparatus of claim 1, wherein the generating means comprises:
a single color palette (125) comprising color information in a fourth color format; and

a plurality of color conversion matrices (107,109) adapted to be selectively coupled to the single color palette.

5 7. The apparatus of claim 6, wherein the first color format is RGB format.

8. The apparatus of claim 6, wherein the conversion matrices (107) convert the first color format
10 into Y, P_R, P_B format.

9. The apparatus of claim 6, wherein the conversion matrices (109) convert the first color format into Y, P_I, P_Q format.
15

10. A method of producing graphics having a color format that matches the color format of a received signal, the method comprising the steps of:

identifying a signal source type (150,151)
20 associated with a received signal;
selecting a color palette (103,105) having a color format that matches the format of the received signal;
generating a graphics signal (Y,P_R,P_B;Y,P_I,P_Q)
25 in response to the selected color palette;
combining said graphics signal with the received signal; and
processing the combined signal to generating an output signal (RBG).

30 11. The method of claim 10, further comprising the step of:
producing the selected color palette by
converting a single color palette into a plurality of color
35 palettes using a plurality of color conversion matrices.

12. The method of claim 11, wherein the color conversion matrices convert an RGB formatted signal into a Y, P_R, P_B formatted signal.

5 13. The method of claim 11, wherein the color conversion matrices convert an RGB formatted signal into a Y, P_I, P_Q formatted signal.

MAILING TO U.S. Patent and Trademark Office

PATENT OPERATIONS

Report to Data Base

ATTN: BOX PCT

Docket No. RCA 89633
Inventor(s) Charles Bailey Neal
Title: METHOD AND APPARATUS FOR PROVIDING ON-SCREEN DISPLAYS FOR A MULTI-COLORIMETRY RECEIVER

Serial No. 10/030834
Filed: 01/10/02

Patent No. _____
Atty/Agent P.P. Kiel
et al.

Enter Date		Enter Number		Check Type		Check Items Mailed with Application	
App. Mailed	005M	2	Independent Claims	X	US PCT NAT	X	Declaration
		0	Claims in Excess 20		Divisional		Statement under CFR § 1.56-013M
		2	Claim Pages		Continuation	X	Assignment & Recordation Sheet
01/10/02		8	Specification Pages		CPA	X	090M Prelim. Amendment
		3	Sheets of Drawings		Reissue		Priority Document
		1	Abstract Pages		Re-Exam	X	013M IDS with 3 References
					US Provisional		Fee Transmittal
					Other PCT	X	Transmittal Ltr. To US Design. Office
\$930.00	Charge						Express Mail Application
							Date Deposited: January 10, 2002
Mailed	Due						FEES
			008M After Rejection				006M Filing Fee Exp. Mail
			012M After Final Rejection				006M Filing Missing Parts
			019M After Allowance IJR312				021 Issue Fee
			083M Supplemental				009M Ext Time \$ 1.136(a)
			090M Voluntary				099M Add Payment of Fee
			079M Dwg. Correction(s)				Fee Transmittal Form
			Page(s) of Drawing(s)				Amount of Fee \$
			OTHER				OTHER
			007M Lic. To For. File				081M Appt. Atty/Agent
			126M Reg. Priority 35USC119				063M Asgn & Rec. Form
			131M Statement DOE				066M Letter to PO
			013M Statement under §1.56				068M Notif. of For. Ref.
			013M IDS w/ references				066M Corr. Of Record
			Certificate of Mailing				xM Please Specify:
			Invitation to Correct				Recordation Fee

*Copy of Int'l Prel. Exam. Report

1603 Rec'd PCT/PTO 11 0 JAN 2002